IN THE CLAIMS

This listing of claims replaces all prior listings and versions of the claims in the present application.

Listing of Claims:

Claim 1 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a cylinder penetrator attached to said handle which includes a cannula and a slidable member slidably mounted in said cannula;

a substantially planar blade having at least a first blade edge, said blade being attached to a distal end of said ~~cannula~~ penetrator and oriented substantially parallel to a main axis of said cylinder penetrator and configured to produce a substantially planar opening in a body tissue for an insertion of a surgical cannula, and

a guard configured to expose a cutting tip of the blade, said guard having an edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 2 (Original): The surgical device according to claim 1, further comprising:

said blade having a first and second blade edge, wherein:

said blade being oriented substantially parallel to said main axis of said cylinder penetrator.

Claim 3 (Previously Presented): The surgical device according to claim 2, wherein a tip portion of said blade is substantially located along said main axis of said penetrator.

Claim 4 (Previously Presented): The surgical device according to claim 1, further comprising a guard mounted on said a slidable member and moveable with respect to said blade to cover said at least first blade edge.

Claim 5 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a ~~cylinder~~ penetrator having a main axis and attached to said handle;

a substantially planar blade having a cutting tip located at a distal end of said ~~cylinder~~ penetrator;

an insufflation passageway configured to discharge a pressurized fluid while said cutting tip is inside a body tissue and transport said pressurized fluid across said body tissue when said cutting tip substantially penetrates the body tissue; and

a guard configured to expose said cutting tip, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 6 (Original): The surgical device according to claim 5, wherein said surgical device further comprises:

an external reservoir configured to supply said insufflation passageway with said pressurized fluid.

Claim 7 (Original): The surgical device according to claim 6, wherein said surgical device further comprises:

a check valve between said insufflation passageway and an exterior of the surgical device, configured to prevent leakage from said insufflation passageway.

Claim 8 (Original): The surgical device according to claim 5, wherein said insufflation chamber is configured to pressurize during an insertion of said cutting tip into said body tissue.

Claim 9 (Original): The surgical device according to claim 5, wherein said pressurized fluid is a gas.

Claim 10 (Original): The surgical device according to claim 7, wherein said check valve is a flap valve.

Claim 11 (Original): The surgical device according to claim 5, wherein said insufflation passageway passes through said cylinder penetrator.

Claim 12 (Currently Amended): The surgical device according to claim 5, wherein:

said planar blade includes a plurality of cutting edges configured to intersect substantially at the main axis of said ~~cylinder~~ penetrator; and

said insufflation passageway is defined in part by said blades.

Claim 13 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a cannula;

a ~~cylinder~~ penetrator having a main axis and attached to said handle;

a substantially planar blade having a cutting tip located at a distal end of said ~~cylinder~~ penetrator;

a tissue expander located at a distal end of said ~~cylinder penetrator~~ cannula and configured to expand a tissue cut by said cutting tip for insertion of said ~~cylinder~~ penetrator; and

a guard configured to expose said cutting tip while said cutting tip is beginning to cut a tissue layer and while said cutting tip is in said tissue layer, and to progressively cover the end of said cutting tip immediately after a most distal point of said cutting tip has substantially passed through said tissue layer; wherein said guard has a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 14 (Currently Amended): The surgical device of claim 13, wherein said blade comprises:

a plurality of blade edges configured to intersect at a position distal to said ~~cylinder~~ penetrator and substantially along said main axis.

Claim 15 (Original): The surgical device of claim 14, wherein said guard comprises:

a safety guard positioned substantially parallel to said blade.

Claim 16 (Canceled).

Claim 17 (Original): The surgical device of claim 13, further comprising:

a spring configured to allow translation of said guard responsive to a force generated during a driving of said cutting tip into and through said tissue layer.

Claim 18 (Original): The surgical device of claim 13, wherein said tissue expander further comprises: tissue expander faces located slightly proximal to said cutting tip.

Claim 19 (Original): The surgical device of claim 13, further comprising:

a penetration monitor configured to indicate a position of said guard relative to said cutting tip.

Claim 20 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a ~~cylinder~~ penetrator having a main axis and attached to said handle;

a substantially planar blade having a cutting tip located at a distal end of said ~~cylinder~~ penetrator;

a tissue expander configured to expand a tissue cut by said cutting tip for insertion of said ~~cylinder~~ penetrator; and

a guard configured to have substantially no contact with said tissue during a penetration of said tissue by said cutting tip; wherein said guard is slidably affixed between said tissue expander and said cutting tip, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 21 (Canceled).

Claim 22 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a ~~cylinder~~ penetrator having a main axis and attached to said handle;

a substantially planar blade cutting tip located at a distal end of said ~~cylinder~~ penetrator;

a guard configured to slidably cover and uncover said cutting tip; and

a locking mechanism configured to hinder an accidental uncovering of said cutting tip by said guard; wherein said guard is configured to expose said cutting tip, said guard having a safety guard edge angle smaller than a blade edge angle of said blade, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 23 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a ~~cylinder~~ penetrator having a main axis and attached to said handle;

a substantially planar blade cutting tip located at a distal end of said ~~cylinder~~ penetrator; wherein said handle includes at least one side horn configured to facilitate pushing, pulling, rotation, and tilting of said surgical device; and

a guard configured to expose said cutting tip, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 24 (Original): The surgical device of claim 23, further comprising:

a cannula attached to a removable portion of said handle.

Claim 25 (Previously Presented): A surgical device, comprising:

means for gripping said surgical device;

means for passing an object of interest into a substantially planar hole;

means for cutting said hole for insertion of said means for passing an object; and

means for halting said means for cutting;

wherein said means for halting comprises means for guarding said means for cutting, said means for guarding being configured to expose a cutting tip portion of said means for

cutting, said means for guarding having a safety guard edge angle smaller than a blade edge angle of said means for cutting when viewed in plan view.

Claim 26 (Canceled).

Claim 27 (Original): The surgical device of claim 25, wherein said means for halting comprises:

means for insufflating a tissue beneath said means for cutting.

Claims 28-30 (Canceled).

Claim 31 (Currently Amended): The surgical device according to claim 5, wherein said at least first blade edge is positioned so as to intersect with said main axis of said ~~cylinder~~ penetrator.

Claim 32 (Currently Amended): The surgical device according to claim 1, wherein said ~~cylinder~~ penetrator is hollow.

Claim 33 (Original): The surgical device according to claim 1, wherein said first blade has two cutting edges.

Claim 34 (Currently Amended): A surgical device, comprising:

a cannula;

a handle configured to be gripped;

a penetrator having a main axis and being attached to said handle;

a substantially planar cutting blade located at a distal end of said penetrator;

a tissue expander ~~expanded at a distal end of the penetrator~~ for expanding a tissue cut by said cutting blade;

an insufflation passageway configured to discharge a pressurized fluid while said cutting blade is inside a body tissue and to transport said pressurized fluid to the body tissue when said cutting blade substantially penetrates the body tissue; and

a substantially planar guard movable with respect to said tissue expander and configured to selectively expose said cutting blade;

wherein said guard has an apex such that an angle subscribed in the apex of the guard is smaller than an angle subscribed by said blade when viewed in plan view for progressively covering said blade during deployment of the penetrator.

Claim 35 (Previously Presented): The surgical device according to claim 34, wherein said insufflation passageway is configured to be pressurized during an insertion of said cutting blade into the body tissue.

Claim 36 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a penetrator having a main axis and being attached to said handle;

a substantially planar cutting blade located at a distal end of said ~~cylinder~~ penetrator; and

an insufflation passageway for discharging a pressurized fluid while said cutting blade is inside a body tissue and for transporting said pressurized fluid across said body tissue when said cutting blade substantially penetrates said body tissue;

an external reservoir for supplying said insufflation passageway with said pressurized fluid;

a check valve positioned between said insufflation passageway and an exterior of the device, said check valve being configured to prevent leakage from said insufflation passageway, wherein said check valve comprises a flap valve openable by said penetrator upon insertion of said penetrator into said handle; and

a substantially planar guard moveable with respect to said cutting blade wherein said guard has an apex such that an angle subscribed in the apex of the guard is smaller than an angle subscribed by said blade when viewed in plan view for progressively covering said blade during deployment of the penetrator.

Claim 37 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a penetrator having a main axis and being attached to said handle;

a substantially planar cutting blade located at a distal end of said penetrator;

a tissue expander ~~located at a distal end of said penetrator~~ for expanding a tissue cut by said at least one cutting blade for insertion of said penetrator; and

a substantially planar guard movable with respect to said tissue expander and configured to expose said cutting blade while said cutting tip is beginning to cut a tissue layer and while said at least one cutting blade is in said tissue layer, and for progressively covering the end of said at least one cutting blade immediately after a most distal point of said cutting blade has substantially passed through said tissue layer;

wherein said cutting blade comprises a single blade having at least one blade edge, said single blade being configured to intersect a distal portion of said penetrator and to intersect substantially along said main axis;

wherein said guard comprises a safety guard substantially parallel to said single blade and wherein said safety guard has an edge configured to intersect a plane containing said main axis at a safety guard edge angle smaller than a blade edge angle defined by the intersection of said blade edge with said plane when viewed in plan view.

Claim 38 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a penetrator having a main axis and being attached to said handle;

a substantially planar cutting blade located at a distal end of said ~~cylinder~~ penetrator;

a tissue expander ~~located at a distal end of said penetrator and~~ configured to expand a tissue cut by said cutting tip for insertion of said penetrator; and

a substantially planar guard movable with respect to said tissue expander and configured to expose said cutting tip while said cutting tip is beginning to cut a tissue layer and while said cutting tip is in said tissue layer, and to progressively cover the end of said cutting tip immediately after a most distal point of said cutting tip has substantially passed through said tissue layer, said guard having a safety guard edge angle smaller than that of said blade when viewed in plan view; and

a penetration monitor configured to indicate a position of said guard relative to said cutting tip.

Claim 39 (Previously Presented): A surgical device, comprising:

a handle configured to be gripped;

a penetrator having a main axis and attached to said handle;

at least one cutting blade located at a distal end of said penetrator;

a tissue expander configured to expand a tissue cut by said at least one cutting blade for insertion of said penetrator; and

a single, substantially planar guard movable with respect to said tissue expander and being configured to selectively expose said at least one cutting blade wherein said guard has an apex such that an angle subscribed in the apex of the guard is smaller than an angle subscribed by said at least one cutting blade when viewed in plan view for progressively covering said at least one cutting blade during deployment of the penetrator.

Claim 40 (Currently Amended): A surgical device, comprising:

a cannula;

a handle configured to be gripped;

a penetrator having a main axis and attached to said handle;

a tissue expander positioned on said ~~penetrator~~ cannula;

a substantially planar cutting blade located at a distal end of said penetrator;

a substantially planar guard configured to slidably cover and uncover said at least one cutting blade, said guard being movable with respect to said tissue expander and being configured to selectively expose said cutting blade; and

a locking mechanism configured to hinder an accidental uncovering of said cutting blade by said guard wherein said guard has an apex such that an angle subscribed in the apex of the guard is smaller than an angle subscribed by said cutting blade when viewed in plan view for progressively covering said at least one cutting blade during deployment of the penetrator.

Claim 41 (Previously Presented): A surgical device, comprising:

a handle configured to be gripped;

a penetrator having a main axis and attached to said handle;

a substantially planar cutting blade located at a distal end of said penetrator;

wherein said handle includes:

a tissue expander configured to expand a tissue cut by said cutting blade;

a substantially planar guard for slidably covering and uncovering said guard being moveable with respect to said tissue expander;

at least one side horn configured to facilitate pushing, pulling, rotation, and tilting of said surgical device wherein said guard has an apex such that an angle subscribed in the apex of the guard is smaller than an angle subscribed by said blade when viewed in plan view for progressively covering said blade during deployment of the penetrator.

Claim 42 (Previously Presented): A surgical device, comprising:

means for gripping said surgical device;

means mounted on said means for gripping said surgical device for passing an object of interest into a hole in a tissue member;

means for expanding the tissue member which is mounted on said means for passing an object into the hole in the tissue member;

substantially planar cutting means mounted on said means for passing the object into the hole in the tissue member for cutting the hole for insertion of said means for passing an object into the hole in the tissue member, said means for cutting the hole in the tissue member being movable with respect to said means for expanding the tissue member; and

means for halting said means for cutting wherein said means for halting comprises means for guarding said means for cutting, said means for guarding said means for cutting being movable with respect to said means for expanding the tissue member wherein said means for guarding said means for cutting has an apex such that an angle subscribed in the

apex of the means for guarding is smaller than an angle subscribed by said means for cutting when viewed in plan view for progressively covering said means for cutting during deployment of said means for expanding the tissue member.

Claim 43 (Previously Presented): The surgical device according to claims 34, 37 or 39, wherein said cutting blade comprises:

a first blade edge attached to a distal end of said penetrator and oriented substantially parallel to a main axis of said penetrator and being configured to produce an opening in a body tissue for an insertion of a surgical cannula.

Claim 44 (Previously Presented): The surgical device according to claim 43, wherein said cutting blade further comprises:

a second blade edge, wherein:

said second blade being attached to a distal end of said penetrator and oriented substantially parallel to said main axis of said penetrator; and

said second blade being edge configured to intersect said first blade edge at an intersection distal to said penetrator.

Claim 45 (Previously Presented): The surgical device according to claim 43, wherein said first blade edge and said second blade edge intersect along said main axis of said penetrator.

Claim 46 (Previously Presented): The surgical device according to claim 36, which comprises a seal which is concentrically positioned with said penetrator, said seal being positioned in said handle and being sealingly engageable with said flap valve.

Claim 47 (Previously Presented): A surgical device, comprising:

a handle configured to be gripped;

penetrator means having a main axis and being attached to said handle;

substantially planar cutting means for cutting body tissue located at a distal end of said penetrator means;

tissue expander means expanded at a distal end of the penetrator means for expanding a tissue cut by said means for cutting tissue;

insufflation passageway means configured to discharge a pressurized fluid while said means cutting for cutting tissue is inside a body tissue and to transport said pressurized fluid to the body tissue when the cutting blade means substantially penetrates the body tissue; and

substantially planar guard means for guarding said means for cutting tissue, said guard means being movable with respect to said tissue expander means and configured to selectively expose said means for cutting tissue wherein said means for guarding said means for cutting tissue has an apex such that an angle subscribed in the apex of the means for guarding is smaller than an angle when viewed in plan view subscribed by said means for cutting tissue for progressively covering said means for cutting tissue during deployment of said means for expanding the tissue member.

Claim 48 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a cannula;

a penetrator having a main axis and being attached to said handle;

a substantially planar cutting blade located at a distal end of said penetrator;

a tissue expander expanded at a distal end of the ~~penetrator~~ cannula for expanding a tissue cut by said cutting blade;

an insufflation passageway configured for discharging a pressurized fluid while said cutting blade is inside a body tissue and for transporting said pressurized fluid to the body tissue when said cutting blade substantially penetrates the body tissue; and

a substantially planar guard movable with respect to said tissue expander and configured to selectively expose said cutting blade wherein said cutting tip is fixed to the penetrator so as to be immovable with respect to said penetrator, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 49 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a penetrator having a main axis and being attached to said handle;

a substantially planar cutting blade located at a distal end of said penetrator;

a tissue expander ~~expanded at a distal end of the penetrator~~ for expanding a tissue cut by said cutting blade;

an insufflation passageway configured for discharging a pressurized fluid while said cutting blade is inside a body tissue and for transporting said pressurized fluid to the body tissue when said cutting blade substantially penetrates the body tissue; and

a substantially planar guard movable between said cutting blade and said expander and being movable with respect to said tissue expander, said guard being configured to selectively expose said cutting blade, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 50 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a penetrator having a main axis and being attached to said handle;

a substantially planar cutting blade located at a distal end of said penetrator;

a tissue expander ~~expanded at a distal end of the penetrator~~ for expanding a tissue cut by said cutting blade;

an insufflation passageway configured for discharging a pressurized fluid while said cutting blade is inside a body tissue and for transporting said pressurized fluid to the body tissue when said cutting blade substantially penetrates the body tissue; and

a substantially planar guard movable with respect to said tissue expander and configured to selectively expose said cutting blade, said guard having a substantially planar portion thereof extending substantially parallel to said cutting blade, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claims 51-90 (Canceled).

Claim 91 (Previously Presented): A surgical device according to claim 49, which comprises:

a locking system for locking and unlocking the guard in position so as to selectably expose said cutting blade during cutting of the tissue and to progressively cover the end of the cutting blade after a most distal point of the cutting blade has substantially passed through a layer of the tissue.

Claims 92-95 (Canceled).

Claim 96 (Previously Presented): A surgical device, comprising:

a penetrator;

a cutting blade located at a distal end of said penetrator;

an insufflation passageway located in said penetrator and configured to discharge a pressurized fluid while said cutting blade is inside a body tissue and to transport said pressurized fluid to the body tissue when said cutting blade substantially penetrates the body tissue; and

a guard movable with respect to said cutting blade and configured to selectively expose said cutting blade;

wherein said guard has an apex such that an angle subscribed in the apex of the guard is smaller than an angle subscribed by said blade when viewed in plan view for progressively covering said blade during deployment of the penetrator.

Claim 97 (Previously Presented): The surgical device according to claim 96, which comprises a tissue expander expanded at a distal end of the guard for expanding a tissue cut by said cutting blade.

Claim 98 (Previously Presented): The surgical device according to claim 96, wherein said surgical device further comprises:

an external reservoir configured to supply said insufflation passageway with said pressurized fluid.

Claim 99 (Previously Presented): The surgical device according to claim 98, wherein said surgical device further comprises a check valve positioned between said insufflation

passageway and an exterior of the surgical device, said check valve being configured to prevent leakage from said insufflation passageway.

Claim 100 (Previously Presented): The surgical device according to claim 96, wherein said insufflation passageway is configured to be pressurized during an insertion of said cutting blade into the body tissue.

Claim 101 (Previously Presented): The surgical device according to claim 96, wherein said pressurized fluid comprises a gas.

Claim 102 (Previously Presented): The surgical device according to claim 97, wherein said insufflation passageway passes through said one of said cylinder penetrator and said expander.

Claim 103 (Previously Presented): The surgical device according to claim 96, wherein:

said cutting tip includes a blade configured to intersect substantially at the main axis of said penetrator; and

said insufflation passageway is formed in one of said guard and said expander.

Claim 104 (Previously Presented): The surgical device according to claim 96, wherein said penetrator is hollow.

Claim 105 (Previously Presented): The surgical device according to claim 96, wherein said guard has a slot formed therein which is aligned with said blade to permit at least a partial covering of said blade by said guard.

Claim 106 (Previously Presented): The surgical device as claimed in claim 96, which comprises a stem member positioned within said penetrator for engagement with said guard for moving said guard towards said cutting tip.

Claim 107 (Previously Presented): The surgical device according to claim 96, wherein said cutting tip is of a smaller diameter than an outer diameter of said penetrator such that a cut made in the tissue by the blade results in a smaller lumen than that of the cannula.

Claim 108 (Previously Presented): The surgical device according to claim 96, wherein said penetrator comprises a cylindrical penetrator.

Claim 109 (Previously Presented): A surgical device, comprising:

a penetrator having a main axis;

a cutting blade located at a distal end of said penetrator; and

an insufflation passageway for discharging a pressurized fluid while said cutting blade is inside a body tissue and for transporting said pressurized fluid across said body tissue when said cutting blade substantially penetrates said body tissue; and

a guard moveable with respect to said cutting blade wherein said guard has an apex such that an angle subscribed in the apex of the guard is smaller than an angle subscribed by said blade when viewed in plan view for progressively covering said blade during deployment of the penetrator.

Claim 110 (Previously Presented): The surgical device according to claim 109, which comprises:

an external reservoir for supplying said insufflation passageway with said pressurized fluid; and

a check valve positioned between said insufflation passageway and an exterior of the device, said check valve being configured to prevent leakage from said insufflation passageway, wherein said check valve comprises a flap valve openable by said penetrator.

Claim 111 (Previously Presented): The surgical device according to claim 109, which comprises a seal which is concentrically positioned with said penetrator, said seal being positioned in said handle and being sealingly engageable with said flap valve.

Claim 112 (Previously Presented): The surgical device according to claim 109, wherein said penetrator comprises a cylindrical penetrator.

Claim 113 (Currently Amended): A surgical device, comprising:

a cannula;

a penetrator having a main axis, said penetrator comprising ~~a cannula and~~ a slidable member positionable in said cannula;

at least one cutting blade located [[at]] within a distal end of said ~~cannula~~ penetrator;

a guard mounted on said a slidable member and movable with respect to said blade and configured to expose said cutting blade while said cutting tip is beginning to cut a tissue layer and while said at least one cutting blade is in said tissue layer, and for progressively covering the end of said at least one cutting blade immediately after a most distal point of

said cutting blade has substantially passed through said tissue layer, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view;

wherein said at least one cutting blade comprises a plurality of blade edges being configured to intersect a distal portion of said penetrator and to intersect substantially along said main axis;

wherein said guard comprises at least one safety guard having at least one safety guard safety guard edge.

Claim 114 (Previously Presented): A surgical device as claimed in Claim 113, which comprises:

a tissue expander located at a distal end of said penetrator for expanding a tissue cut by said at least one cutting blade for insertion of said penetrator.

Claim 115 (Previously Presented): The surgical device of claim 113, wherein said cutting tip comprises a tissue expander having an insufflation passageway formed therein.

Claim 116 (Previously Presented): The surgical device of claim 115, wherein said at least one guard comprises safety guards having a surface which is substantially parallel with said blade.

Claim 117 (Previously Presented): The surgical device of claim 113, further comprising:

a spring configured to allow translation of said guard responsive to a force generated during a driving of said cutting tip into and through said tissue layer.

Claim 118 (Previously Presented): The surgical device of claim 113, wherein said tissue expander has a face portion thereof located in proximity with said cutting tip.

Claim 119 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a penetrator having a main axis and being attached to said handle;

at least one cutting blade located at a distal end of said cylinder penetrator;

a tissue expander ~~located~~ configured to expand a tissue cut by said cutting tip for insertion of said penetrator; and

a guard movable with respect to said tissue expander and configured to expose said cutting tip while said cutting tip is beginning to cut a tissue layer and while said cutting tip is in said tissue layer, and to progressively cover the end of said cutting tip immediately after a most distal point of said cutting tip has substantially passed through said tissue layer, said guard being configured to expose said cutting tip, said guard having a safety guard edge angle smaller than a blade edge angle of said at least one cutting blade when viewed in plan view.

Claim 120 (Previously Presented): A surgical device, comprising:

a penetrator;

at least one cutting blade located at a distal end of said penetrator; and

a guard movable with respect to said blade and being configured to selectively expose said at least one cutting blade wherein said guard has an apex such that an angle subscribed in the apex of the guard is smaller than an angle subscribed by said at least one cutting blade when viewed in plan view for progressively covering said at least one cutting blade during deployment of the penetrator.

Claim 121 (Previously Presented): The surgical device as claimed in claim 120, which comprises:

a tissue expander configured to expand a tissue cut by said at least one cutting blade for insertion of said penetrator wherein said guard is slidably affixed between said tissue expander and said cutting tip.

Claim 122 (Previously Presented): The surgical device according to claims 96, 113 or 120, wherein said cutting blade comprises:

a first blade having a first blade edge, said first blade edge being attached to a distal end of said penetrator, being oriented substantially parallel to a main axis of said penetrator and being configured to produce an opening in a body tissue for insertion of a surgical cannula.

Claim 123 (Previously Presented): The surgical device according to claim 122, wherein said cutting blade further comprises:

a blade having a first and second blade edge, wherein:

said blade is attached to a distal end of said penetrator and is oriented substantially parallel to said main axis of said penetrator.

Claim 124 (Previously Presented): The surgical device according to claim 123, wherein said intersection of said first and second blade edges is substantially located along said main axis of said penetrator.

Claim 125 (Previously Presented): The surgical device according to claim 124, wherein said blade is substantially planar.

Claim 126 (Previously Presented): The surgical device according to claim 122, wherein said blade is substantially planar.

Claim 127 (Previously Presented): A surgical device, comprising:

a penetrator;

at least one cutting blade located at a distal end of said penetrator;

a guard configured to slidably cover and uncover said at least one cutting blade, said guard being movable with respect to said blade and being configured to selectively expose said at least one cutting blade; and

a locking mechanism configured to hinder an accidental uncovering of said at least one cutting blade by said guard wherein said guard has an apex such that an angle subscribed in the apex of the guard is smaller than an angle subscribed by said at least one cutting blade when viewed in plan view for progressively covering said at least one cutting blade during deployment of the penetrator.

Claim 128 (Previously Presented): The surgical device as claimed in claim 127, which comprises a tissue expander positioned on one of said penetrator and said guard.

Claim 129 (Previously Presented): A surgical device, comprising:

a penetrator;

at least one cutting blade located at a distal end of said penetrator;

a tissue expander configured to expand a tissue cut by said at least one cutting blade;

a guard for slidably covering and uncovering said at least one cutting blade, said guard being moveable with respect to said at least one cutting blade; and

at least one side horn configured to facilitate pushing, pulling, rotation, and tilting of said surgical device wherein said guard has an apex such that an angle subscribed in the apex of the guard is smaller than an angle subscribed by said blade when viewed in plan view for progressively covering said at least one cutting blade during deployment of the penetrator.

Claim 130 (Previously Presented): The surgical device of claim 129, further comprising:

a cannula attachable to a removable portion of said handle.

Claim 131 (Previously Presented): A surgical device, comprising:

means for gripping said surgical device;

means mounted on said means for gripping said surgical device for passing an object of interest into a hole in a tissue member;

means for expanding the tissue member which is mounted on said means for passing an object into the hole in the tissue member;

means mounted on said means for passing the object into the hole in the tissue member for cutting the hole for insertion of said means for passing an object into the hole in the tissue member, said means for cutting the hole in the tissue member being movable with respect to said means for cutting the tissue member; and

means for halting said means for cutting wherein said means for halting comprises means for guarding said means for cutting, said means for guarding said means for cutting being movable with respect to said means for cutting wherein said means for guarding said means for cutting has an apex such that an angle subscribed in the apex of the means for

guarding is smaller than an angle subscribed by said means for cutting when viewed in plan view for progressively covering said means for cutting during deployment of said means for expanding the tissue member.

Claim 132 (Previously Presented): The surgical device of claim 131, wherein said means for guarding said means for cutting comprises at least one guard.

Claim 133 (Previously Presented): The surgical device of claim 131, wherein said means for halting comprises means for insufflating a tissue beneath said means for cutting.

Claim 134 (Currently Amended): A surgical device, comprising:

penetrator means having a main axis;

means for cutting body tissue located at a distal end of said penetrator means;

tissue expander means expanded at a distal end of the ~~penetrator means~~ surgical device for expanding a tissue cut by said means for cutting tissue;

insufflation passageway means configured to discharge a pressurized fluid while said means for cutting tissue is inside a body tissue and to transport said pressurized fluid to the body tissue when the cutting blade means substantially penetrates the body tissue; and

guard means for guarding said means for cutting tissue, said guard means being movable with respect to said cutting blade means and configured to selectively expose said means for cutting tissue wherein said means for guarding said means for cutting tissue has an apex such that an angle subscribed in the apex of the means for guarding is smaller than an angle subscribed by said means for cutting tissue when viewed in plan view for progressively covering said means for cutting tissue during deployment of said means for expanding the tissue member.

Claim 135 (Previously Presented): The surgical device according to claim 134, wherein said surgical device further comprises an external reservoir configured to supply said insufflation passageway means with said pressurized fluid.

Claim 136 (Previously Presented): The surgical device according to claim 135, wherein said surgical device further comprises check valve means positioned between said insufflation passageway means and an exterior of a surgical device, said check valve means being configured to prevent leakage from said insufflation passageway means.

Claim 137 (Previously Presented): The surgical device according to claim 135, wherein said insufflation passageway means is configured to be pressurized during insertion of said cutting tip into the body tissue.

Claim 138 (Previously Presented): A surgical device, comprising:

a penetrator;

a cutting blade located at a distal end of said penetrator;

an insufflation passageway configured for discharging a pressurized fluid while said cutting blade is inside a body tissue and for transporting said pressurized fluid to the body tissue when said cutting blade substantially penetrates the body tissue; and

a guard movable with respect to said cutting blade, said guard being configured to selectively expose said cutting blade, said guard being configured to expose a cutting tip of said cutting blade, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 139 (Previously Presented): The surgical device as claimed in claim 138, which comprises a tissue expander expanded at a distal end of the penetrator for expanding a tissue cut by said cutting blade.

Claim 140 (Previously Presented): A surgical device, comprising:

a penetrator;

a cutting blade located at a distal end of said penetrator;

an insufflation passageway configured for discharging a pressurized fluid while said cutting blade is inside a body tissue and for transporting said pressurized fluid to the body tissue when said cutting blade substantially penetrates the body tissue; and

a guard movable with respect to said cutting blade and configured to selectively expose said cutting blade, said guard having a substantially planar portion thereof extending substantially parallel to said cutting blade, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 141 (Previously Presented): A surgical device as claimed in claim 140, which comprises a tissue expander expanded at a distal end of the penetrator for expanding a tissue cut by said cutting blade.

Claim 142 (Currently Amended): A surgical device, comprising:

a penetrator;

a cutting tip located at a distal end of said penetrator;

a tissue expander ~~located at a distal end of said penetrator~~ for expanding a tissue cut by said cutting tip for insertion of said penetrator;

a guard movable with respect to said cutting tip for exposing said cutting tip while said cutting tip is beginning to cut a tissue layer and while said cutting tip is in said tissue layer, and for progressively covering the end of said cutting tip immediately after a most distal point of said cutting tip has substantially past through said tissue layer; and

wherein said cutting tip comprises at least one blade substantially parallel to said main axis and having at least one blade edge, said guard being positioned substantially parallel to said at least one blade and wherein said safety guard further comprises a safety guard edge having a guard edge angle smaller than a blade edge angle when viewed in plan view defined by an intersection of said at least one blade edge with said main axis.

Claim 143 (Currently Amended): A surgical device, comprising:

a cannula;

a penetrator having a main axis ~~and including a cannula~~ and an a slidable member;

a substantially flat cutting blade located at a distal end of said ~~cannula~~ penetrator;

a tissue expander expanded ~~at a distal end of the penetrator~~ for expanding a tissue cut by said cutting blade, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view;

a guard movable with respect to said tissue expander and configured to selectively expose said cutting blade;

said guard progressively covering said blade during deployment of the penetrator.

Claim 144 (Previously Presented): The surgical device according to claim 143, wherein said surgical device further comprises:

an external reservoir configured to supply said insufflation passageway with said pressurized fluid.

Claim 145 (Previously Presented): A surgical device, comprising:

a penetrator having a main axis;

a substantially flat cutting blade located at a distal end of said penetrator;

a tissue expander expanded at a distal end of the penetrator for expanding a tissue cut by said cutting blade;

a guard movable with respect to said tissue expander and configured to selectively expose said cutting blade;

said guard progressively covering said blade during deployment of the penetrator, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view;

wherein said surgical device further comprises:

an external reservoir configured to supply said insufflation passageway with said pressurized fluid; and

a check valve positioned adjacent an end portion of said penetrator, said check valve being configured to prevent leakage from said penetrator.

Claim 146 (Previously Presented): The surgical device according to claim 145, wherein said insufflation passageway is configured to be pressurized during an insertion of said cutting blade into the body tissue.

Claim 147 (Currently Amended): The surgical device according to claim 143, which comprises a cannula within which said penetrator is ~~portionable~~ positionable.

Claim 148 (Previously Presented): A surgical device, comprising:

a penetrator having a main axis;

a substantially flat cutting blade located at a distal end of said penetrator; and

a substantially flat guard moveable with respect to said cutting blade for progressively covering said blade during deployment of the penetrator, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 149 (Previously Presented): The surgical device according to claim 148, which comprises a tissue expander positioned within a distal portion of the penetrator and fixed to a distal portion of the penetrator in proximity with said cutting blade.

Claim 150 (Previously Presented): The surgical device according to claim 148, wherein said penetrator comprises a cylindrical penetrator.

Claim 151 (Currently Amended): A surgical device, comprising:

a cannula;

a penetrator having ~~a cannula and~~ a slidable member;

a substantially flat cutting blade located [[at]] in proximity with a distal end of said ~~cannula~~ penetrator;

a tissue expander located ~~within and fixed to~~ in proximity with [[a]] said distal end of said penetrator, in proximity with said cutting blade, and configured to expand a tissue cut by said cutting tip for insertion of said penetrator; and

a substantially flat guard movable with respect to said tissue expander and configured to expose said cutting tip while said cutting tip is beginning to cut a tissue layer and while said cutting tip is in said tissue layer, said guard progressively covering the end of said

cutting tip immediately after a most distal point of said cutting tip has substantially passed through said tissue layer, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 152 (Previously Presented): The surgical device according to claim 151, which comprises a penetration monitor configured to indicate a position of said guard relative to said cutting tip.

Claim 153 (Currently Amended): A surgical device, comprising:

a cannula;

a penetrator having a cannula and a slidable member;

a tissue expander positioned within said ~~penetrator~~ cannula;

a substantially flat cutting blade located at a distal end of said ~~cannula~~ penetrator;

a substantially planar guard configured to slidably cover and uncover said cutting blade, said guard being movable with respect to said tissue expander and being configured to selectively expose said at least one cutting blade; and

a locking mechanism configured to hinder an accidental uncovering of said at least one cutting blade by said guard, said guard progressively covering said at least one cutting blade during deployment of the penetrator, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 154 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a cannula;

a penetrator having a main axis and attached to said handle, said penetrator including ~~a cannula and~~ a slidable member;

a substantially flat cutting blade located at a distal end of said ~~cannula~~ penetrator;

wherein said handle includes:

a tissue expander configured to expand a tissue cut by said at least one cutting blade;

a guard for slidably covering and uncovering said at least one cutting blade, said guard being moveable with respect to said tissue expander, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view;

at least one side horn configured to facilitate pushing, pulling, rotation, and tilting of said surgical device wherein said guard progressively covers said cutting blade during deployment of the penetrator.

Claim 155 (Previously Presented): The surgical device of claim 154, further comprising:

a cannula attached to a removable portion of said handle.

Claim 156 (Previously Presented): A surgical device, comprising:

means for gripping said surgical device;

means mounted on said means for gripping said surgical device for passing an object of interest into a hole in a tissue member;

means for expanding the tissue member which is mounted on said means for passing an object into the hole in the tissue member;

means mounted on said means for passing the object into the hole in the tissue member for cutting the hole for insertion of said means for passing an object into the hole in the tissue member, said means for cutting the hole in the tissue member being movable with

respect to said means for expanding the tissue member and comprising a substantially flat blade; and

means for halting said means for cutting wherein said means for halting comprises means for guarding said means for cutting, said means for guarding said means for cutting being movable with respect to said means for expanding the tissue member wherein said means for guarding said means for cutting progressively covers said means for cutting during deployment of said means for expanding the tissue member, said means for guarding being configured to expose said means for cutting, and said means for guarding having a safety guard edge angle smaller than a blade edge angle of said means for cutting when viewed in plan view.

Claim 157 (Previously Presented): The surgical device of claim 156, wherein said means for halting comprises:

means for insufflating a tissue beneath said means for cutting.

Claim 158 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a cannula;

penetrator means having a main axis and being attached to said handle, said penetrator including ~~a cannula and~~ a slidable member;

means for cutting body tissue located at a distal end of said ~~cannula~~ penetrator;

tissue expander means fixedly mounted ~~to an interior portion of the penetrator means at a distal end of the penetrator means~~ for expanding a tissue cut by said means for cutting tissue;

guard means for guarding said means for cutting tissue, said guard means being movable with respect to said tissue expander means and configured to selectively expose said means for cutting tissue wherein said means for guarding said means for cutting tissue progressively covers said means for cutting tissue during deployment of said means for expanding the tissue member, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 159 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a penetrator having a main axis and being attached to said handle;

a cutting blade located at a distal end of said penetrator;

a tissue expander expanded ~~at an interior portion of the penetrator and at a distal end of the penetrator~~ for expanding a tissue cut by said cutting blade;

an insufflation passageway configured for discharging a pressurized fluid while said cutting blade is inside a body tissue and for transporting said pressurized fluid to the body tissue when said cutting blade substantially penetrates the body tissue; and

a guard movable between said cutting blade and said expander and being movable with respect to said tissue expander, said guard being configured to selectively expose said cutting blade, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 160 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a penetrator having a main axis and being attached to said handle;

a substantially planar cutting blade located at a distal end of said penetrator;

a tissue expander ~~mounted within and expanded at a distal end of the penetrator~~ for expanding a tissue cut by said cutting blade; and

a guard movable with respect to said tissue expander and configured to selectively expose said cutting blade, said guard having a substantially planar portion thereof extending substantially parallel to said cutting blade, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 161 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a cannula;

a penetrator having a main axis and being attached to said handle, said penetrator including ~~a cannula and~~ a slidable member;

a substantially planar cutting tip located at a distal end of said ~~cannula~~ penetrator;

a tissue expander located at [[a]] said distal end of said penetrator for expanding a tissue cut by said cutting tip for insertion of said penetrator;

a guard movable with respect to said tissue expander for exposing said cutting tip while said cutting tip is beginning to cut a tissue layer and while said cutting tip is in said tissue layer, and for progressively covering the end of said cutting tip immediately after a most distal point of said cutting tip has substantially past through said tissue layer;

wherein said cutting tip comprises a blade having at least one blade edge, said guard being positioned substantially parallel to said blade, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 162 (Currently Amended): A surgical device, comprising:

a penetrator;

a cannula;

a cutting tip located at a distal end of said penetrator;

an insufflation passageway configured to discharge a pressurized fluid while said cutting tip is inside a body tissue and to transport said pressurized fluid to the body tissue when said cutting tip substantially penetrates the body tissue; and

a guard moveable with respect to said cutting tip and configured to selectively expose said cutting tip, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 163 (Currently Amended): A surgical device, comprising:

a cannula;

a penetrator which includes ~~a cannula and~~ a slidable member;

a cutting tip located at a distal end of said ~~cannula~~ penetrator; and

an insufflation passageway configured to discharge a pressurized fluid while said cutting tip is inside a body tissue and to transport said pressurized fluid against said body tissue when said cutting tip substantially penetrates said body tissue.

Claim 164 (Previously Presented): A surgical device, comprising:

a penetrator having a main axis and being attachable to a handle for being gripped;

a cutting blade located at a distal end of said penetrator;

a guard positionable at the distal end of said penetrator for guarding said cutting blade, said cutting blade having a cutting tip and being configured to expose said cutting tip while said cutting tip is beginning to cut a tissue layer and while said cutting tip is in said tissue layer, and to progressively cover the end of said cutting tip immediately after a most distal point of said cutting tip has substantially passed through said tissue layer;

said guard having a safety guard edge smaller than a blade edge angle defined by said cutting blade, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 165 (Previously Presented): The surgical device of claim 164, further comprising:

a spring configured to allow translation of one of said cutting blade and said guard responsive to a force generated during a driving of said cutting tip into and through said tissue layer.

Claim 166 (Previously Presented): The surgical device of claim 164, which comprises a tissue expander located proximal to said cutting tip.

Claim 167 (Previously Presented): The surgical device according to claim 164, wherein said cutting blade has one of a substantially dull cutting tip and a substantially rounded cutting tip.

Claim 168 (Previously Presented): The surgical device according to claim 165 wherein said cutting tip comprises one of a substantially dull cutting tip and a substantially rounded cutting tip.

Claim 169 (Previously Presented): The surgical device according of claim 164, which comprises a penetration monitor mounted on the handle for indicating a position of said guard relative to said cutting tip.

Claim 170 (Previously Presented): A surgical device, comprising:

a penetrator having a main axis and being removably attachable to a handle for being gripped;

at least one cutting blade located at a distal end of said penetrator and being connected thereto; and

a guard positionable at the distal end of said penetrator for guarding said at least one cutting blade and being configured to selectively expose said at least one cutting blade wherein said guard has an apex such that an angle subscribed in the apex of the guard is smaller than an angle subscribed by said at least one cutting blade when viewed in plan view for progressively covering said at least one cutting blade during deployment of the penetrator.

Claim 171 (Previously Presented): A surgical device according to claim 170, wherein said cutting blade has one of a substantially dull tip and a substantially rounded tip.

Claim 172 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a penetrator having a main axis and attached to said handle;

at least one cutting blade located at a distal end of said penetrator and having a cutting tip;

a guard positionable at the distal end of said penetrator and configured to cover and uncover said cutting tip, one of said guard and said cutting tip being movable to selectively expose said cutting tip; and

a locking mechanism configured to hinder an accidental uncovering of said cutting tip by said guard wherein said guard has an apex such that an angle subscribed in the apex of the

guard is smaller than an angle subscribed by said blade when viewed in plan view for progressively covering said blade during deployment of the penetrator.

Claim 173 (Previously Presented): A surgical device according to claim 172, wherein said cutting tip comprises one of a dull tip and a substantially rounded tip.

Claim 174 (Previously Presented): A surgical device, comprising:

a penetrator having a main axis and being attachable to a handle for being gripped;

a cutting blade located at a distal end of said penetrator;

guard means positionable at the distal end of said penetrator for guarding said cutting blade, said cutting blade having a cutting tip and being configured to expose said cutting tip while said cutting tip is beginning to cut a tissue layer and while said cutting tip is in said tissue layer, and to progressively cover the end of said cutting tip immediately after a most distal point of said cutting tip has substantially passed through said tissue layer;

said guard means having a safety guard edge smaller than a blade edge angle defined by said cutting blade when viewed in plan view.

Claim 175 (Previously Presented): The surgical device of claim 174, further comprising:

spring means for allowing translation of one of said cutting blade and said guard means responsive to a force generated during a driving of said cutting tip into and through said tissue layer.

Claim 176 (Previously Presented): The surgical device of claim 174, which comprises a tissue expander located proximal to said cutting tip.

Claim 177 (Previously Presented): The surgical device according to claim 174, wherein said cutting blade has one of a substantially dull cutting tip and a substantially rounded cutting tip.

Claim 178 (Previously Presented): The surgical device according to claim 175 wherein said cutting tip comprises one of a substantially dull cutting tip and a substantially rounded cutting tip.

Claim 179 (Previously Presented): The surgical device according of claim 174, which comprises penetration monitoring means mounted on the handle for indicating a position of said guard means relative to said cutting tip.

Claim 180 (Previously Presented): A surgical device, comprising:

a penetrator having a main axis and being removably attachable to a handle for being gripped;

at least one cutting blade located at a distal end of said penetrator and being connected thereto; and

guard means positionable at the distal end of said penetrator for guarding said at least one cutting blade and being configured to selectively expose said at least one cutting blade wherein said guard means has an apex such that an angle subscribed in the apex of the guard means is smaller than an angle subscribed by said at least one cutting blade when viewed in plan view for progressively covering said at least one cutting blade during deployment of the penetrator.

Claim 181 (Previously Presented): A surgical device according to claim 180, wherein said cutting blade has one of a substantially dull tip and a substantially rounded tip.

Claim 182 (Previously Presented): A surgical device, comprising:

a handle configured to be gripped;

a penetrator having a main axis and attached to said handle;

at least one cutting blade located at a distal end of said penetrator and having a cutting tip;

guard means positionable at the distal end of said penetrator and configured for covering and uncovering said cutting tip, one of said guard means and said cutting tip being movable selectively to expose said cutting tip; and

locking means configured for hindering an accidental uncovering of said cutting tip by said guard wherein said guard means has an apex such that an angle subscribed in the apex of the guard means is smaller than an angle subscribed by said blade when viewed in plan view for progressively covering said blade during deployment of the penetrator.

Claim 183 (Previously Presented): A surgical device according to claim 182, wherein said cutting tip comprises one of a dull tip and a substantially rounded tip.

Claim 184 (Previously Presented): A surgical device, comprising:

a handle configured to be gripped;

a penetrator having a main axis and being attached to said handle;

a blade having a cutting tip located at a distal end of said penetrator;

an insufflation passageway configured to discharge a pressurized fluid upon said cutting tip penetrating a body tissue and to transport said pressurized fluid across said body tissue when said cutting tip has substantially penetrated the body tissue: and

a guard configured to expose said cutting tip, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 185 (Previously Presented): A surgical device, comprising:

a handle configured to be gripped;

a penetrator having a main axis and being attached to said handle;

a blade having a cutting tip located at a distal end of said penetrator;

said penetrator including a cannula and a slidable member positioned within said cannula;

said blade being located at a distal end of said slidable member; and

an insufflation passageway configured to discharge a pressurized fluid through a portion of said slidable member and past said cutting tip upon said cutting tip penetrating a body tissue and transporting said pressurized fluid across said body tissue when said cutting tip has substantially penetrated the body tissue; and

a guard configured to expose said cutting tip, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 186 (Previously Presented): A surgical device, comprising:

a penetrator configured to pierce a membrane of a patient; and

a guard positionable to selectively permit and prohibit guarding of the penetrator from piercing the membrane, the guard comprising:

a shield member movable along a longitudinal axis between a first position covering the penetrator and a second position uncovering the penetrator, the shield member comprising a stop member;

a locking member configured to contact the stop member to prohibit the shield member from moving from the first position to the second position; and

an unlocking member surrounding a portion of the shield member and configured to move along the longitudinal axis to move the locking member out of contact with the stop member to permit the shield member to move from the first position to the second position, said guard being configured to expose a cutting tip portion of said penetrator, said guard having a safety guard edge angle smaller than a blade edge angle of said penetrator when viewed in plan view.

Claim 187 (Previously Presented): The surgical device according to claim 186, wherein the penetrator comprises a needle and the membrane comprises one of a peritoneum, a tissue layer and a membrane layer of a patient.

Claim 188 (Previously Presented): The surgical device according to claim 187, wherein the needle comprises one of a trocar and an infusion needle.

Claim 189 (Previously Presented): The surgical device according to claim 187, wherein the needle comprises an insufflation device.

Claim 190 (Previously Presented): The surgical device according to claim 186, wherein the penetrator comprises one of a trocar and a needle.

Claim 191 (Previously Presented): The surgical device according to claim 186, wherein the shield member comprises at least one of a protective member, a shield member and a guard connected to a movable member, the protective member being movable to cover and to uncover the penetrator, and

the unlocking member comprises a member configured to be moved so as to permit the shield member to move from the first position to the second position.

Claim 192 (Previously Presented): The surgical device according to claim 190, wherein the unlocking member is movable between an armed position in which the locking member is moved out of contact with the stop member and an unarmed position in which the locking member is in contact with the stop member.

Claim 193 (Previously Presented): The surgical device according to claim 191, wherein the guard further comprises a biasing member to urge the shield member toward the first position.

Claim 194 (Previously Presented): A surgical device, comprising:

a tube comprising a penetrator and a guard positionable to permit and prohibit the penetrator from piercing a peritoneum of a patient;

a handle connected to the tube, the handle defining a void;

a guard stem disposed in the void and connected to the guard such that the guard and guard stem are selectively movable along a longitudinal axis from a covering position in which the guard covers the penetrator to an uncovering position in which the guard uncovers the penetrator;

a locking member disposed in the void and movable between a locked position in which the locking member contacts the locking tube to prevent the guard from uncovering the penetrator and an unlocked position to permit the guard to uncover the penetrator; and

an unlocking member movable between an unarmed position in which the unlocking member permits the locking member to contact the locking tube to prevent the guard from uncovering the penetrator and an armed position in which the unlocking member permits the guard to uncover the penetrator, said guard being configured to expose a cutting tip portion of said penetrator, said guard having a safety guard edge angle smaller than a blade edge angle of said penetrator when viewed in plan view.

Claim 195 (Previously Presented): The surgical device according to claim 194, wherein the penetrator comprises one of a needle and a trocar.

Claim 196 (Previously Presented): The surgical device according to claim 195, wherein the needle comprises one of an infusion needle and an insufflation needle.

Claim 197 (Previously Presented): The surgical device according to claim 194, further comprising:

a biasing member disposed in the void, the biasing member being configured to apply a biasing force to urge the locking tube, guard tube, and guard from the uncovering position to the covering position.

Claim 198 (Previously Presented): A method of using a surgical device including a penetrator configured to pierce a membrane of a patient and a guard positionable to permit and to prohibit the penetrator from piercing the membrane, the guard including a shield

member movable along a longitudinal axis between a first position covering the penetrator and a second position uncovering the penetrator, the shield member including a stop member, the guard including a locking member configured to prohibit the shield member from moving from the first position to the second position, and the guard including an unlocking member surrounding a portion of the shield member and configured to move along the longitudinal axis to move the locking member out of contact with the stop member to permit the shield member to move from the first position to the second position, the method comprising:

moving the unlocking member along the longitudinal axis to uncover the penetrator; and

piercing the membrane with the uncovered penetrator, said guard being configured to expose said cutting tip, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 199 (Previously Presented): The method according to claim 198, wherein piercing the membrane comprises piercing the membrane with one of a needle and a trocar.

Claim 200 (Previously Presented): A method of using a surgical device, comprising:

moving an unlocking device in a longitudinal direction such that the unlocking device moves a locking device out of contact with a stop member disposed on a shield member; and

moving the shield member along the longitudinal axis to uncover a penetrator to pierce a membrane of a patient; and

configuring a guard to expose the cutting tip portion of said penetrator, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 201 (Previously Presented): The method according to claim 200, wherein moving the unlocking device comprises moving the unlocking device to move the locking device in a direction substantially perpendicular to the longitudinal direction.

Claim 202 (Previously Presented): The method according to claim 200, further comprising:

piercing the membrane of the patient with the penetrator; and

covering the penetrator with the shield member.

Claim 203 (Previously Presented): The method according to claim 202, wherein covering the penetrator comprises applying a biasing force to the stop member to move the shield member to cover the penetrator.

Claim 204 (Previously Presented): A surgical device, comprising:

a first tube;

a handle connected to the first tube;

a penetrator connected to an end of the first tube, the penetrator comprising a blade having a left blade edge and a right blade edge configured to pierce a membrane of a patient;

a second tube disposed in an interior of the first tube and in an interior of the handle; and

a shield member connected to an end of the second tube and disposed adjacent the penetrator in the first tube, the shield member comprising a left covering edge and a right covering edge, the shield member being configured to move along a longitudinal axis between a first position covering the penetrator and a second position uncovering the penetrator,

wherein an angle between the left and right blade edges is greater than an angle between the left and right covering edges when viewed in plan view.

Claim 205 (Previously Presented): The surgical device according to claim 204, further comprising:

a biasing member configured to urge the shield member from the second position to the first position.

Claim 206 (Previously Presented): The surgical device according to claim 205, wherein the shield members comprise substantially flat plates.

Claim 207 (Previously Presented): A method of using a surgical device including a first tube, a handle connected to the first tube, a penetrator connected to an end of the first tube, the penetrator including left and right blade edges configured to pierce a membrane of a patient, a second tube disposed in an interior of the first tube and in an interior of the handle, and a shield member connected to an end of the second tube and disposed adjacent the penetrator, the shield member including left and right covering edges, the shield member being configured to move along a longitudinal axis between a first position covering the penetrator and a second position uncovering the penetrator, wherein a first angle between the left and right blade edges is greater than an angle between the left and right covering edges when viewed in plan view, the method comprising:

uncovering the penetrator; and

piercing the membrane with the penetrator.

Claim 208 (Previously Presented): The method according to claim 207, further comprising:

covering the penetrator with the shield member after removal of the surgical device from the membrane.

Claim 209 (Previously Presented): A method of using a surgical device, comprising:

piercing a membrane of a patient with a penetrator blade comprising a left blade edge and a right blade edge; and

moving a first shield member comprising a left cover edge and a right cover edge to cover the penetrator,

wherein an angle between the left and right blade edges is greater than an angle between the left and right cover edges when viewed in plan view.

Claim 210 (Previously Presented): The method according to claim 209, further comprising:

moving the first shield member to uncover the penetrator before piercing the membrane of the patient.

Claim 211 (Previously Presented): The method according to claim 210, further comprising:

disposing the first shield member and a second shield member on opposite sides of the penetrator, the shield members comprising substantially flat plates.

Claim 212 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a cannula;

a cylinder penetrator attached to said handle, said penetrator including ~~a cannula and~~ a slidable member; and

an at least partially planar blade having at least a first blade edge, said blade being attached to a distal end of said ~~cannula~~ penetrator and being oriented substantially parallel to a main axis of said cylinder penetrator and being configured to produce a partially planar opening in a body tissue for an insertion of a surgical cannula, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 213 (Previously Presented): The surgical device according to claim 212,

said blade having a first and second blade edge, and

said blade being oriented substantially parallel to said main axis of said cylinder penetrator.

Claim 214 (Previously Presented): The surgical device according to claim 213, wherein a tip portion of said blade is located substantially in proximity with an extension of said main axis of said cylinder penetrator.

Claim 215 (Previously Presented): The surgical device according to claim 212, further comprising a guard moveable with respect to said blade to cover said at least first blade edge.

Claim 216 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a cannula;

a ~~cylinder~~ penetrator having a main axis and attached to said handle, said penetrator including ~~a cannula and~~ a slidable member;

an at least partially planar blade having a cutting tip located at a distal end of said ~~cannula~~ penetrator;

an insufflation passageway configured to discharge a pressurized fluid while said cutting tip is inside a body tissue and transport said pressurized fluid across said body tissue when said cutting tip substantially penetrates the body tissue, and

a guard for covering said cutting tip, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 217 (Previously Presented): The surgical device according to claim 216, wherein said surgical device further comprises:

an external reservoir configured to supply said insufflation passageway with said pressurized fluid.

Claim 218 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a ~~cylinder~~ penetrator having a main axis and attached to said handle;

an at least partially planar blade having a cutting tip located at a distal end of said ~~cylinder~~ penetrator; and

an insufflation passageway configured to discharge a pressurized fluid while said cutting tip is inside a body tissue and transport said pressurized fluid across said body tissue when said cutting tip substantially penetrates the body tissue;

a guard for covering said cutting tip, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view;

wherein said surgical device further comprises:

an external reservoir configured to supply said insufflation passageway with said pressurized fluid; and

a check valve positioned between said insufflation passageway and an exterior of the surgical device, and check valve being configured to prevent leakage from said insufflation passageway.

Claim 219 (Previously Presented): The surgical device according to claim 216, wherein said insufflation chamber is configured to pressurize during an insertion of said cutting tip into said body tissue.

Claim 220 (Previously Presented): The surgical device according to claim 216, wherein said pressurized fluid is a gas.

Claim 221 (Previously Presented): The surgical device according to claim 218, wherein said check valve is a flap valve.

Claim 222 (Previously Presented): The surgical device according to claim 216, wherein said insufflation passageway passes through said cylinder penetrator.

Claim 223 (Previously Presented): The surgical device according to claim 214, wherein:

said planar blade includes a plurality of cutting edges configured to intersect substantially at the main axis of said cylinder penetrator; and

said insufflation passageway is substantially aligned with said main axis.

Claim 224 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a cannula;

a ~~cylinder~~ penetrator having a main axis and attached to said handle, said cylinder penetrator including a ~~cannula and~~ slidable member;

a blade having a cutting tip located at a distal end of said ~~cannula~~ penetrator;

a tissue expander located at a distal end of said ~~cylinder penetrator~~ cannula and configured to expand a tissue cut by said cutting tip for insertion of said ~~cylinder~~ penetrator; and

a guard configured to expose said cutting tip while said cutting tip is beginning to cut a tissue layer and while said cutting tip is in said tissue layer, and to progressively cover the end of said cutting tip immediately after a most distal point of said cutting tip has substantially passed through said tissue layer, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 225 (Previously Presented): The surgical device of claim 224, wherein said blade comprises:

a plurality of blade edges configured to intersect at a position distal to said cylinder penetrator and substantially along said main axis.

Claim 226 (Previously Presented): The surgical device of claim 225, wherein said guard comprises:

a safety guard positioned substantially parallel to said blade.

Claim 227 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a cannula;

a ~~cylinder~~ penetrator having a main axis and attached to said handle;

a blade having a cutting tip located at a distal end of said ~~cylinder~~ penetrator;

a tissue expander located at a distal end of said ~~cylinder penetrator~~ cannula and configured to expand a tissue cut by said cutting tip for insertion of said cylinder penetrator; and

a guard configured to expose said cutting tip while said cutting tip is beginning to cut a tissue layer and while said cutting tip is in said tissue layer, and to progressively cover the end of said cutting tip immediately after a most distal point of said cutting tip has substantially passed through said tissue layer;

wherein said blade comprises:

a plurality of blade edges configured to intersect at a position distal to said cylinder penetrator and substantially along said main axis;

said guard comprises

a safety guard positioned substantially parallel to said blade; and

wherein said guard further has a safety guard edge angle smaller than a blade edge angle of said blade, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 228 (Previously Presented): The surgical device of claim 224, further comprising:

a spring configured to allow translation of said guard responsive to a force generated during a driving of said cutting tip into and through said tissue layer.

Claim 229 (Previously Presented): The surgical device of claim 224, wherein said tissue expander further comprises tissue expander faces located substantially proximal to said cutting tip.

Claim 230 (Previously Presented): The surgical device of claim 224, further comprising:

a penetration monitor configured to indicate a position of said guard relative to said cutting tip.

Claim 231 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a ~~cylinder~~ penetrator having a main axis and attached to said handle;

a blade having a cutting tip located at a distal end of said ~~cylinder~~ penetrator;

a tissue expander configured to expand a tissue cut by said cutting tip for insertion of said ~~cylinder~~ penetrator; and

a guard configured to have substantially no contact with said tissue during penetration of said tissue by said cutting tip, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 232 (Previously Presented): The surgical device of claim 231, wherein said guards are slidably positioned between said tissue expander and said cutting tip.

Claim 233 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a ~~cylinder~~ penetrator having a main axis and being attached to said handle;

a blade cutting tip located at a distal end of said ~~cylinder~~ penetrator;

a guard configured to slidably cover and uncover said cutting tip; and

a locking mechanism configured to hinder an accidental uncovering of said cutting tip by said guard, said guard being configured to expose said cutting tip, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 234 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a ~~cylinder~~ penetrator having a main axis and attached to said handle;

a blade cutting tip located at a distal end of said ~~cylinder~~ penetrator; wherein said handle includes at least one side horn configured to facilitate pushing, pulling, rotation, and tilting of said surgical device; and

a guard configured to cover and uncover said cutting tip, said guard being configured to expose said cutting tip, said guard having a safety guard edge angle smaller than a blade edge angle of said cutting tip when viewed in plan view.

Claim 235 (Previously Presented): The surgical device of claim 234, further comprising:

a cannula attached to a removable portion of said handle.

Claims 236-244 (Canceled).

Claim 245 (Currently Amended): A surgical device, comprising:

a handle configured to be gripped;

a penetrator having a main axis and being attached to said handle;

a cutting blade located at a distal end of said penetrator;

a tissue expander expanded at a distal end of the ~~penetrator~~ surgical device for expanding a tissue cut by said cutting blade;

an insufflation passageway configured to discharge a pressurized fluid while said cutting blade is inside a body tissue and to transport said pressurized fluid to the body tissue when said cutting blade substantially penetrates the body tissue; and

a guard movable with respect to said tissue expander and configured to selectively expose said cutting blade;

wherein said guard has an apex such that an angle subscribed in the apex of the guard is smaller than an angle subscribed by converging edges of said blade for progressively covering said blade during deployment of the penetrator when viewed in plan view.

Claim 246 (Previously Presented): The surgical device according to claim 245, wherein said insufflation passageway is configured to be pressurized during an insertion of said cutting blade into the body tissue.

Claim 247 (Previously Presented): A surgical device, comprising:

a handle configured to be gripped;

a penetrator having a main axis and being attached to said handle;

a cutting blade located at a distal end of said cylinder penetrator; and

an insufflation passageway for discharging a pressurized fluid while said cutting blade is inside a body tissue and for transporting said pressurized fluid across said body tissue when said cutting blade substantially penetrates said body tissue;

an external reservoir for supplying said insufflation passageway with said pressurized fluid; and

a guard moveable with respect to said cutting blade wherein said guard has an apex such that an angle subscribed in the apex of the guard is smaller than an angle subscribed by two adjacent cutting edges of said blade for progressively covering said blade during deployment of the penetrator when viewed in plan view.

Claim 248 (Previously Presented): A surgical device, comprising:

means for gripping said surgical device;

means mounted on said means for gripping said surgical device for passing an object of interest into a hole in a tissue member;

means for expanding the tissue member which is mounted on said means for passing an object into the hole in the tissue member;

cutting means mounted on said means for passing the object into the hole in the tissue member for cutting the hole for insertion of said means for passing an object into the hole in the tissue member, said means for cutting the hole in the tissue member being movable with respect to said means for expanding the tissue member; and

means for halting said means for cutting wherein said means for halting comprises means for guarding said means for cutting, said means for guarding said means for cutting being movable with respect to said means for expanding the tissue member wherein said means for guarding said means for cutting has an apex such that an angle subscribed in the apex of the means for guarding is smaller than an angle subscribed by cutting edges of said

means for cutting when viewed in plan view for progressively covering said means for cutting during deployment of said means for expanding the tissue member.

Claim 249 (Currently Amended): A surgical device, comprising:

a cannula;

a penetrator having a main axis, said penetrator including ~~a cannula and~~ a slidable member;

at least one cutting blade located at a distal end of said ~~cannula~~ penetrator;

a guard movable with respect to said blade and configured to expose said cutting blade while said cutting blade is beginning to cut a tissue layer and while said cutting blade is in said tissue layer, and for progressively covering cutting edges of said cutting blade immediately after a most distal point of said cutting blade has substantially passed through said tissue layer;

wherein said cutting edges comprises a plurality of blade edges being configured to intersect a substantially distal portion of said penetrator and to intersect substantially along said main axis;

wherein said guard comprises at least one safety guard having at least one safety guard safety guard edge, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 250 (Currently Amended): A surgical device as claimed in Claim 249, which comprises:

a tissue expander located at a distal end of said ~~penetrator~~ cannula for expanding a tissue cut by said at least one cutting blade for insertion of said penetrator.

Claim 251 (Previously Presented): The surgical device of claim 249, wherein said cutting blade comprises a tissue expander having an insufflation passageway formed therein.

Claim 252 (Previously Presented): The surgical device of claim 249, wherein said at least one guard comprises safety guards having a surface which is substantially parallel with surfaces of said blade.

Claim 253 (Previously Presented): A surgical device, comprising:

a penetrator;

a cutting blade located at a distal end of said penetrator;

an insufflation passageway configured for discharging a pressurized fluid while said cutting blade is inside a body tissue and for transporting said pressurized fluid to the body tissue when said cutting blade substantially penetrates the body tissue; and

a guard movable with respect to said cutting blade, said guard being configured to selectively expose said cutting blade, said guard being configured to expose said blade, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 254 (Currently Amended): The surgical device as claimed in claim 253, which comprises a cannula tissue expander expanded at a distal end of the ~~penetrator~~ cannula for expanding a tissue cut by said cutting blade.

Claim 255 (Currently Amended): A surgical device, comprising:

a cannula;

a penetrator having ~~a cannula and~~ a slidable member;

a cutting blade located at a distal end of said ~~cannula~~ penetrator;

an insufflation passageway configured for discharging a pressurized fluid while said cutting blade is inside a body tissue and for transporting said pressurized fluid to the body tissue when said cutting blade substantially penetrates the body tissue; and

a guard movable with respect to said cutting blade and configured to selectively expose said cutting blade, said guard having a portion thereof extending substantially parallel to said cutting blade, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 256 (Currently Amended): A surgical device as claimed in claim 253, which comprises a tissue expander expanded at a distal end of the ~~penetrator~~ cannula for expanding a tissue cut by said cutting blade.

Claim 257 (Currently Amended): A surgical device, comprising:

a cannula;

a penetrator;

a cutting tip located at a distal end of said penetrator;

a tissue expander located at a distal end of said ~~penetrator~~ cannula for expanding a tissue cut by said cutting tip for insertion of said penetrator;

a guard movable with respect to said cutting tip for exposing said cutting tip while said cutting tip is beginning to cut a tissue layer and while said cutting tip is in said tissue layer, and for progressively covering the end of said cutting tip immediately after a most distal point of said cutting tip has substantially past through said tissue layer; and

wherein said cutting tip comprises at least one blade substantially parallel to said main axis and having at least one blade edge, said guard being positioned substantially parallel to

said at least one blade and wherein said safety guard further comprises a safety guard edge having a guard edge angle smaller than a blade edge angle defined by an intersection of said at least one blade edge with said main axis when viewed in plan view.

Claim 258 (Currently Amended): A surgical device, comprising:

a cannula;

a penetrator having a main axis, said penetrator including ~~a cannula and~~ a slidable member;

a cutting blade have substantially flat cutting blade portion located at a substantially distal end of said cannula;

a tissue expander expanded at a distal end of the ~~penetrator~~ cannula for expanding a tissue cut by said cutting blade;

a guard movable with respect to said tissue expander and configured to selectively expose said cutting blade;

said guard progressively covering said blade during deployment of the penetrator, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view.

Claim 259 (Previously Presented): The surgical device according to claim 258, wherein said surgical device further comprises:

an external reservoir configured to supply said insufflation passageway with said pressurized fluid.

Claim 260 (Previously Presented): A surgical device, comprising:

a penetrator having a main axis;

a cutting blade have substantially flat cutting blade portion located at a substantially distal end of said penetrator;

a tissue expander expanded at a distal end of the penetrator for expanding a tissue cut by said cutting blade;

a guard movable with respect to said tissue expander and configured to selectively expose said cutting blade;

said guard progressively covering said blade during deployment of the penetrator, said guard having a safety guard edge angle smaller than a blade edge angle of said blade when viewed in plan view;

wherein said surgical device further comprises:

an external reservoir configured to supply said insufflation passageway with said pressurized fluid; and

an insufflation passageway provided in said penetrator and a check valve positioned between said insufflation passageway and an exterior portion of the surgical device, said check valve being configured to prevent leakage from said insufflation passageway.